

Differential pressure transmitter

testo 6321

Measurement of differential pressure in the measuring range from 100 Pa to 2 bar

Magnet valve for the automatic zero-point adjustment guarantees high temperature-independent accuracy and long-term stability

Adjustment and analysis saves time and costs in commissioning and maintenance

Available with and without display



hPa

A differential pressure transmitter with a good price/performance ratio for applications in air conditioning and ventilation technology. Automated building services place increased demands on the exact regulation of ambient conditions. The monitoring and regulation of air filters, blowers and air flows, based on the measurement of differential pressure, guarantees security and energy efficiency.

The highly accurate and long-term stable testo 6321 provides the measurement values needed to monitor and regulate differential pressure safely and efficiently in air conditioning, ventilation and cleanroom technology.

Technical data

Measurement parameters

Differential pressure

| | | |
|------------------------------|---|---|
| Measuring range | 0 to 100 Pa 0 to 10 hPa 0 to 20 hPa 0 to 50 hPa 0 to 100 hPa 0 to 500 hPa 0 to 1000 hPa 0 to 2000 hPa -100 to 100 Pa | -10 to 10 hPa -20 to 20 hPa -50 to 50 hPa -100 to 100 hPa -500 to 500 hPa -1000 to 1000 hPa hPa -2000 to 2000 hPa hPa |
| Measurement uncertainty* | ±1.2% of measuring range final value ±0,3 Pa Temperature gain drift: 0.05% of measuring range per Kelvin deviation from nominal temperature 22 °C Zero-point drift: 0% (due to zero-point adjustment) | |
| Sensor | Piezoresistive sensor | |
| Autom. zero-point adjustment | via magnetic valve | |
| Overload capacity | Measuring range | Overload |
| | 0 to 100 Pa | 20000 Pa |
| | 0 to 10 hPa | 200 hPa |
| | 0 to 20 hPa | 200 hPa |
| | 0 to 50 hPa | 750 hPa |
| | 0 to 100 hPa | 750 hPa |
| | 0 to 500 hPa | 2500 hPa |
| | 0 to 1000 hPa | 2500 hPa |
| | 0 to 2000 hPa | 2500 hPa |
| | -100 to 100 Pa | 20000 Pa |
| | -10 to 10 hPa | 200 hPa |
| | -20 to 20 hPa | 200 hPa |
| | -50 to 50 hPa | 750 hPa |
| | -100 to 100 hPa | 750 hPa |
| | -500 to 500 hPa | 2500 hPa |
| | -1000 to 1000 hPa | 2500 hPa |
| | -2000 to 2000 hPa | 2500 hPa |

Inputs and outputs

Analog outputs

| | |
|--------------------------------|--|
| Output type | 0 to 1/5/10 V (4-wire) 4 to 20 mA (4-wire) |
| Measuring rate | 1/s |
| Resolution | 12 bit |
| Accuracy of the analog outputs | 0 to 1 V ±2.5 mV 0 to 5 V ±12.5 mV 0 to 10 V ±25 mV 4 to 20 mA ±0.05 mA |
| Max. load | 500 Ω |

Further outputs

| | |
|----------------------|--|
| other analog outputs | Mini DIN for P2A software (adjustment and parameterization software) |
|----------------------|--|

Supply

| | |
|---------------------|------------------|
| Voltage supply | 20 to 30 V AC/DC |
| Current consumption | 30 mA |

General

Housing

| | |
|-------------------|--------------------------------------|
| Material / colour | ABS / white (RAL 9010) or light grey |
|-------------------|--------------------------------------|

| | |
|--------|---------------|
| Weight | Approx. 160 g |
|--------|---------------|

Display

| | |
|---------|-----------------------|
| Display | 1-line LCD (optional) |
|---------|-----------------------|

| | | |
|------------|-------------------|------------|
| Resolution | Measuring range | Resolution |
| | 0 to 100 Pa | 0.1 Pa |
| | 0 to 10 hPa | 0.01 hPa |
| | 0 to 20 hPa | 0.01 hPa |
| | 0 to 50 hPa | 0.01 hPa |
| | 0 to 100 hPa | 0.1 hPa |
| | 0 to 500 hPa | 0.1 hPa |
| | 0 to 1000hPa | 1 hPa |
| | 0 to 2000hPa | 1 hPa |
| | -100 to 100 Pa | 0.1 Pa |
| | -10 to 10 hPa | 0.01 hPa |
| | -20 to 20 hPa | 0.01 hPa |
| | -50 to 50 hPa | 0.01 hPa |
| | -100 to 100 hPa | 0.1 hPa |
| | -500 to 500 hPa | 0.1 hPa |
| | -1000 to 1000 hPa | 1 hPa |
| | -2000 to 2000 hPa | 1 hPa |

Miscellaneous

| | |
|---------------------------------|--|
| Protection class | IP65 only when the transmitter is wired and/or sealing plugs are in use |
| EMC | EC guideline: 2004/108/EC |
| Automatic zero-point adjustment | Every 60 seconds ex-works |

Operating conditions

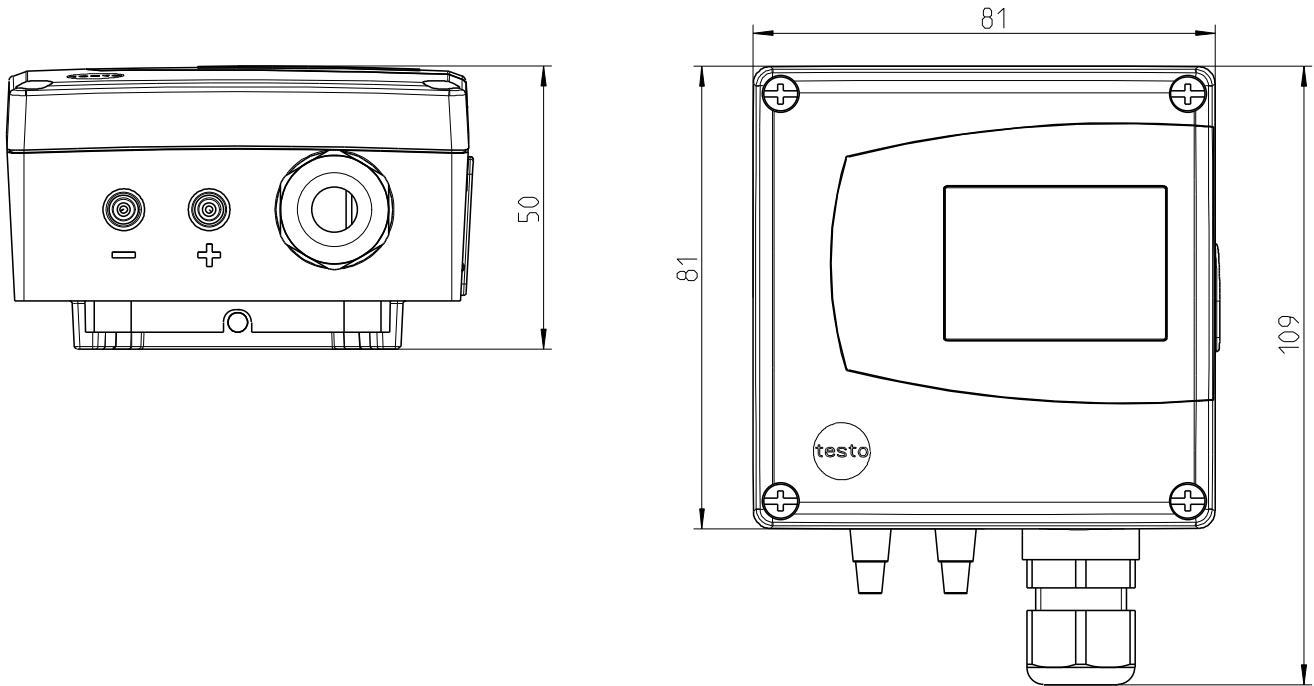
| | |
|----------------------|---------------|
| Humidity (sensor) | 0 to 90 %RH |
| Temperature (sensor) | -5 to +50 °C |
| Storage temperature | -40 to +80 °C |

The determination of measurement uncertainty takes place according to GUM (Guide to the Expression of Uncertainty in Measurement):

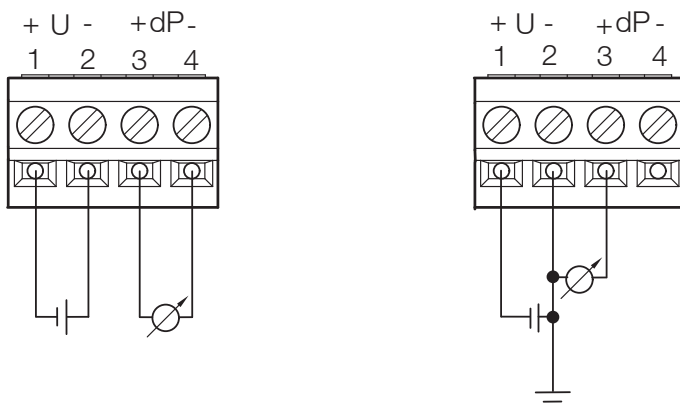
For the determination of measurement uncertainty, the accuracy of the measuring instrument (hysteresis, linearity, reproduceability), the uncertainty contribution of the test site as well as the uncertainty of the adjustment site (works calibration) are taken into account. For this purpose, the value of k=2 of the extension factor, which is usual in measurement technology is used as a basis, which corresponds to a trust level of 95%.

Technical drawings / Connection plan

Technical drawings



Connection plan



Options / Ordering example

The following options can be specified for the testo 6321

AXX Measuring range
 BXX Analog output/supply
 CXX Display
 EXX Housing colour
 FXX Unit

Delivery incl. wall holder

AXX Measuring range

A03 0 to 100 Pa
 A05 0 to 10 hPa
 A06 0 to 20 hPa
 A07 0 to 50 hPa
 A08 0 to 100 hPa
 A09 0 to 500 hPa
 A10 0 to 1000 hPa
 A11 0 to 2000 hPa
 A23 -100 to 100 Pa
 A25 -10 to 10 hPa
 A26 -20 to 20 hPa
 A27 -50 to 50 hPa
 A28 -100 to 100 hPa
 A29 -500 to 500 hPa
 A30 -1000 to 1000 hPa
 A31 -2000 to 2000 hPa

BXX Analog output / supply

B02 0 to 1 V (4-wire, 24 VAC/DC)
 B03 0 to 5 V (4-wire, 24 VAC/DC)
 B04 0 to 10 V (4-wire, 24 VAC/DC)
 B06 4 to 20 mA (4-wire, 24 VAC/DC)

CXX Display

C00 without display
 C01 with display

EXX Housing colour

E01 Housing colour light grey, incl. Testo logo (coloured)
 E02 Neutral housing, white, without Testo logo
 E03 Neutral housing, white, incl. Testo logo (black/white)

FXX Unit

F01 Pa / min / max
 F02 hPa / min / max
 F03 kPa / min / max
 F04 mbar / min / max
 F05 bar / min / max
 F06 mm H₂O / min / max
 F07 inch H₂O / min / max
 F08 inch H_G / min / max
 F09 kg/cm² / min / max
 F10 PSI / min / max

Ordering example

Order code for testo 6321 transmitter with the following options:

- Measuring range 0 to 100 Pa
- Analog output 0 to 5 V
- Without display
- Housing colour light grey
- Unit mbar

0555 6321 A03 B03 C00 E00 F04

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